

## REMARKS/ARGUMENTS

By this amendment, claims 2-10 are amended, and claim 1 is canceled. These amendments are made to even more clearly recite the claimed invention, do not add prohibited new matter and are fully supported by the specification.

Reconsideration and withdrawal of the rejections set forth in the outstanding Office Action are respectfully requested in view of the foregoing amendments and the following remarks.

### Rejection Under 35 U.S.C. 102(b)

The Office Action rejects claims 1 and 5-10 under 35 U.S.C. § 102(b) as allegedly anticipated by Perets (U.S. Patent Application Publication No. 2003/0003889, hereinafter "PERETS").

In response, and without agreeing with or acquiescing to the rejection, Applicant notes that claim 1 has been canceled, and the elements of claim 1 have been incorporated into claim 2. Applicant respectfully traverses the rejection of claims 5-9 and submits that PERETS fails to disclose all of the elements of Applicant's claimed invention. Claims 5-9 depend upon claim 2, which recites:

A radio reception apparatus comprising:

    a receiver configured to receive a signal on a per time unit basis, the received signal including a known signal pattern on a predetermined per time unit basis;

    an adjuster configured to adjust a filter for filtering the received signal using the known signal pattern on a per time unit basis; and

    a canceller configured to cancel an interference component included in the time unit using the adjusted filter;

    wherein the adjuster comprises:

        a modulation scheme determiner configured to process likelihoods calculated for individual modulation schemes and to determine the modulation using the known signal pattern; and

a tap coefficient controller configured to control tap coefficients to set the filter according to the determined modulation scheme.

Initially, Applicant notes that the Examiner acknowledges that PERETS does not teach a "modulation scheme determiner" (Office Action, page 4). This admission that PERETS does not disclose all of the elements of the claimed invention disqualifies PERETS as a reference under 35 U.S.C. § 102(b).

Furthermore, in claim 10 (and claims 5-9), signals are received and the filter for filtering the received signal is adjusted on a *per time unit basis*. More specifically, claim 10 recites a reception filtering method comprising "receiving a signal on a per time unit basis, the received signal including a known signal pattern on a per predetermined time unit basis" and "adjusting a filter for filtering the received signal using the known signal pattern on a per time unit basis." In PERETS, filter updates are performed on a per data block basis (see, e.g., paragraph [0024] of PERETS), not on a per time unit basis. Furthermore, and independently of the above, PERETS does not disclose an adjusting that comprises "processing likelihoods calculated for individual modulation schemes."

Accordingly, at least for the reasons discussed above, Applicant respectfully submits that the PERETS does not disclose all of the elements of the claimed invention, and respectfully requests withdrawal of the rejection over PERETS.

#### Rejection Under 35 U.S.C. 103(a)

The Office Action rejects claims 2 under 35 U.S.C. § 103(a) as being unpatentable over PERETS in view of Haartsen (U.S. Patent Application Publication No. 2002/ 0131486, hereinafter "HAARTSEN"). The Office Action also rejects claims 3 and

4 under 35 U.S.C. § 103(a) as being unpatentable over PERETS in view of Jayaraman et al. (U.S. Patent Application Publication No. 2003/0087622, hereinafter "JAYARAMAN").

In view of the remarks above, Applicant submits that PERETS does not disclose all of the elements of the claimed invention, and neither HAARTSEN nor JAYARAMAN cure this defect. PERETS and HAARTSEN or JAYARAMAN do not teach "a receiver configured to receive a signal on a per time unit basis, the received signal including a known signal pattern on a per predetermined time unit basis" and "an adjuster configured to adjust a filter for filtering the received signal using the known signal pattern on a per time unit basis." Accordingly, the combination of cited publications do not teach all of the elements of the claims 2, 3, and 4.

Furthermore, in response to the Examiner's rejection of claims 2 and 3, Applicant notes that PERETS, HAARTSEN, and JAYARAMAN do not teach "a modulation scheme determiner configured to process likelihoods calculated for individual modulation schemes and to determine the modulation using the known signal pattern," as recited in claims 2 and 3.

The Examiner acknowledges that PERETS does not teach a "modulation scheme determiner." Although the Examiner asserts that HAARTSEN teaches a "modulation scheme determiner," Applicant respectfully disagrees.

HAARTSEN discloses a radio receiver which uses a plurality of modulation schemes. However, HAARTSEN does not disclose how the receiver determines which modulation scheme will be selected. HAARTSEN suggests that modulation schemes may be selected based on link conditions or the particular training signal being used

(see, e.g., HAARTSEN, paragraphs [0010] and [0011]). However, HAARTSEN does not teach a “modulation scheme determiner configured to process likelihoods calculated for individual modulation schemes and to determine the modulation using the known signal pattern,” as recited in claims 2 and 3. Thus, PERETS and HAARTSEN or JAYARAMAN do not teach all of the elements recited in claims 2 and 3.

Further, there is no motivation or suggestion to make the claimed combination, which must be found in the prior art, not in applicant’s disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ 2d 1438 (Fed. Cir. 1991). PERETS, HAARTSEN, and JAYARAMAN do not provide such a motivation or suggestion. Even if PERETS could be combined with HAARTSEN or JAYARAMAN, the mere fact that these publications can be combined or modified does not render the resultant combination obvious unless prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ 2d 1430 (Fed. Cir. 1990).

The Examiner does not provide any motivation, based upon the art, to combine the cited publications. For example, the Examiner asserts that it would have been obvious to combine PERETS and HAARTSEN “in order to provide suitable demodulation scheme to process signal [sic].” However, the Examiner does not discuss why the modulation scheme in PERETS is not “suitable” or indicate where PERETS or HAARTSEN discuss the desirability of such a combination. Thus, although the Examiner asserts that it would be desirable to combine these publications, the Examiner does not provide any support, based on the prior art, for such an assertion. Furthermore, when the Examiner discusses combining the teachings of PERETS and JAYARAMAN, the Examiner simply states the two publications may be combined “in

order [to] enhance signal processing quality” without providing any motivation actually cited in the art for this combination. Accordingly, Applicant submits that the Examiner has improperly combined PERETS with HAARTSEN or JAYARAMAN.

In view of the foregoing, Applicant respectfully submits that any proper combination of PERETS with HAARTSEN or JAYARAMAN, fails to establish a *prima facie* case of obviousness. Applicant respectfully requests withdrawal of the rejections for obviousness over PERETS in view of HAARTSEN or PERETS in view of JAYARAMAN.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the outstanding rejections, and an indication of the allowability of all claims pending in the present application in due course.

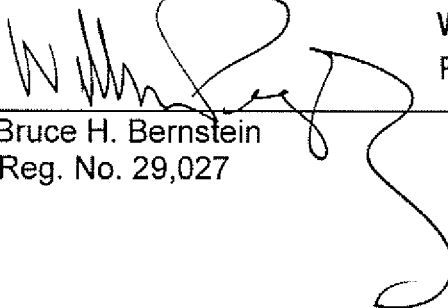
### SUMMARY AND CONCLUSION

For the foregoing reasons, it is believed that all of the claims in this application are in condition for allowance, which action is respectfully requested.

If any extension of time is deemed to be necessary to maintain the pendency of the application, including any extension of time fees for entry of an Examiner's Amendment, the Patent and Trademark Office is hereby requested and authorization is hereby provided to charge any necessary fees to maintain the pendency of this application to Deposit Account No. 19-0089.

If the Examiner has any questions, or wishes to discuss this matter, the Examiner is respectfully invited to contact the undersigned at the below-listed telephone number.

Respectfully submitted,  
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